

WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTERS  
PATENT OF THE UNITED STATES IS:

1. An open-ended sleeve for use by an amputee or non-amputee, said open-ended sleeve being made of stretchable fabric and adapted to extend from a position above a knee of a wearer to a position below the knee of a wearer, said fabric being predominately stretchable in a circumferential direction above, below, and behind the knee of a wearer and predominately stretchable in a longitudinal direction in the area of the knee of a wearer.
2. An open-ended sleeve for use by an amputee or non-amputee, said open-ended sleeve being made of elastic fabric, said sleeve being adapted to extend above and below a knee of a wearer, said sleeve comprising a front portion adapted to cover the knee of a wearer and a back portion, the front portion comprising a thicker, higher wear resistant elastic fabric and the back portion comprising a thinner, highly elastic fabric.
3. An open-ended sleeve according to claim 2, wherein the front portion of the sleeve is substantially centered with respect to the knee of a wearer and extends circumferentially around the sleeve for a distance of from about 10% to about 90% of the total circumference of the sleeve.
4. An open-ended sleeve for use by an amputee or a non-amputee, said sleeve being made from elastic fabric and adapted to extend from a position above to a position below the knee of a wearer, said sleeve including lateral sides, at least one longitudinally extending stay attached to each lateral side of said sleeve.
5. An open-ended sleeve according to claim 4, wherein said stays have a substantially flat cross section.
6. An open-ended sleeve according to claim 4, wherein said stays have a substantially circular cross section.

7. An open-ended sleeve according to claim 6, wherein said sleeve includes a top end and a bottom end and said stays extend continuously from a point adjacent the top end of the sleeve to a point adjacent the bottom end of the sleeve.

8. An open-ended sleeve according to claim 5, wherein said sleeve includes a top end, a central portion adapted to cover the knee of a wearer, and a bottom end, each of said lateral sides including at least two stays with one of said stays on each of said lateral sides extending from a point adjacent the top of the sleeve to a position adjacent the central portion of the sleeve and another of said stays on each of said lateral sides extending from a point adjacent the bottom of said sleeve to a position adjacent the central portion of said sleeve.

9. An open-ended sleeve according to claim 1, wherein said sleeve includes an end, said end being finished with overlock stitching extending circumferentially around the end.

10. An open-ended sleeve according to claim 1, wherein said sleeve includes an end, said end having a band of elastic fabric attached thereto.

11. An open-ended sleeve according to claim 10, wherein said band is attached adjacent the end of the sleeve by zigzag stitching.

12. An open-ended sleeve according to claim 10, wherein said band is U-shaped and is attached over the end of the sleeve by zigzag stitching.

13. An open-ended sleeve according to claim 1, wherein said sleeve includes an end and a plurality of circumferentially spaced loops attached to said sleeve adjacent said end.

14. An open-ended sleeve according to claim 13, including an elastic band retained within said loops.

15. An open-ended sleeve according to claim 14, wherein said band includes a first end and a second end, fasteners on said first end and said second end for adjustably attaching the first end and the second end of the band together.

16. A tube sock-shaped covering for enclosing an amputation stump, said covering having an open end for introduction of said stump and a closed end opposite said open end, said covering comprising elastic fabric, said covering including a front portion, a back portion, and a bottom portion, one or both of said front portion and said bottom portion comprising a higher wear resistant elastic fabric and said remaining portion(s) comprising a highly elastic fabric, said covering being coated on the inside thereof with a foamed or non-foamed polymeric material.

17. A tube sock-shaped covering according to claim 16, wherein said front portion extends from said closed end to said open end and comprises 10% to 90% of said covering.

18. A tube sock-shaped covering for enclosing an amputation stump, said covering having an open end for introduction of said stump and a closed end opposite said open end, said covering comprising a front portion, a rear portion, and a bottom portion, said front portion and said rear portion being made of a wear resistant elastic fabric, said bottom portion being made from a higher wear resistant elastic fabric than said front and rear portions, said covering being coated on the inside thereof with a foamed or a non-foamed polymeric material.

19. A tube sock-shaped covering according to claim 18, wherein said bottom portion comprises two distinct pieces of fabric attached to each other along a bottom edge with one of said pieces also being attached along a top edge to the front portion and the other of said pieces also being attached along a top edge to the rear portion.

20. A tube sock-shaped covering according to claim 18, wherein said bottom portion comprises a single piece of fabric being attached along a top edge to said front portion and said rear portion.

21. An open-ended elastomeric sleeve for use by an amputee or non-amputee, said open-ended sleeve comprising a first open end, a second open end, and an intermediate portion provided between said first open end and second open end, said sleeve further comprising fabric which coats the outside of the first open end, the second open end, and the intermediate portion, and the inside of the intermediate portion only, and said intermediate portion has some means for attaching to a prosthetic socket.

22. The sleeve as claimed in Claim 21, wherein some or all of said fabric is fiber-on-end fabric.

23. A tube sock-shaped covering for enclosing an amputation stump, said covering having an open end for introduction of said stump and a closed end opposite said open end, said covering comprising fiber-on-end fabric, said covering being coated on the inside thereof with a polymeric material.

24. A tube sock-shaped covering for enclosing an amputation stump, said covering having an open end for introduction of said stump and a closed end opposite said open end, said covering having a docking means for suspension of the covering to the wearer, and said covering being coated on the inside thereof with polymeric material.

25. A tube sock-shaped covering for enclosing an amputation stump, said covering having an open end for introduction of said stump and a closed end opposite said open end, said covering having a docking means for attaching pads, and said covering being coated on the inside thereof with polymeric material.

26. A tube sock-shaped covering for enclosing an amputation stump, said covering having an open end for introduction of said stump and a closed end opposite said open end, said covering being coated on the inside thereof with polymeric material and coated on all or part of the outside thereof with metallic material.

27. A tube sock-shaped covering for enclosing an amputation stump, said covering having an open end for introduction of said stump and a closed end opposite said open end, said covering being coated on the inside thereof with polymeric material having one or more bosses or annular rings for joining to a prosthetic socket.

28. A tube sock-shaped covering for enclosing an amputation stump, said covering having an open end for introduction of said stump and a closed end opposite said open end, said covering being coated on the inside thereof with polymeric material, said covering and/or said polymeric material comprising a thermal-regulating additive.

29. A gel composition comprising a block copolymer, mineral oil, and a thermal-regulating additive.